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Hewlett Packard Enterprise  
3404 E. Harmony Road  
Mail Stop 79  
Fort Collins, CO 80528

EXAMINER
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ALLEN, BRITTANY N

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* RAMAKUMAR KOSURU

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Appeal 2016-007945  
Application 13/460,072<sup>1</sup>  
Technology Center 2100

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Before MAHSHID D. SAADAT, JAMES W. DEJMEK, and  
SCOTT B. HOWARD, *Administrative Patent Judges*.

HOWARD, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134(a) from the Final Rejection of claims 1–20, which constitute all of the claims pending in this application. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

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<sup>1</sup> Appellant identifies Hewlett-Packard Enterprise Development, L.P. as the real party in interest. App. Br. 3.

## THE INVENTION

The disclosed invention is directed to indexing a skip list. Abstract.

Claim 1, reproduced below with the creating step emphasized, is illustrative of the claimed subject matter:

1. A method, comprising:
  - receiving information regarding read and write operations on a virtual memory configured to store data, wherein the virtual memory is allocated in a plurality of pages;
  - inserting a node in a skip list having a plurality of levels, wherein the node corresponds with a page of the plurality of pages in the virtual memory ;
    - creating a new node at a lowest level in the skip list during a write operation to a new page not represented in the skip list, wherein the new node corresponds with the new page, and wherein creating the new node includes incrementing the new node to a higher level of the skip list as determined by comparing a selected value with a preselected write probability; and*
  - reading from the new page during a read operation, wherein reading from the new page includes incrementing the corresponding node to a higher level of the skip list as determined by comparing a selected value with a preselected read probability, wherein the read probability is not equal to the write probability.

## REFERENCES

The prior art relied upon by the Examiner as evidence in rejecting the claims on appeal is:

Lubbers	US 5,659,739	Aug. 19, 1997
Szendy	US 2003/0145186 A1	July 31, 2003
Soulard	US 2012/0136871 A1	May 31, 2012

Funda Ergun *et al.*, “Biased Skip Lists for Highly Skewed Access Patterns,” in ALENEX 2001, LNCS 2153 216–229 (A.L. Buchsbaum and J. Snoeyink eds., 2001) (hereinafter “Ergun”).

## REJECTIONS

Claims 1–7, 12, 13, 15–20 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Soulard in view of Ergun and Szendy. Final Act. 3–15.

Claims 8–11 and 14 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Soulard in view of Ergun, Szendy, and Lubbers. Final Act. 16–18.

## ANALYSIS

We have reviewed the Examiner’s rejection in light of Appellant’s arguments that the Examiner erred. In reaching this decision, we have considered all evidence presented and all arguments made by Appellant. We are persuaded by Appellant’s arguments that, based on the current record, the Examiner erred.

Appellant argues the Examiner erred in finding Ergun teaches the claimed creating step. App. Br. 9. Specifically, Appellant argues because Ergun teaches incrementing an element in a skip list based on historical access rates, Ergun does not teach or suggest “incrementing the new node to a higher level of the skip list . . . *upon creation* of the new node . . . based on comparing a selected value with a predicted write [probability]” as recited in claim 1. *Id* at 10.

The Examiner finds Ergun teaches the creating step recited in claim 1. Final Act. 4; Ans. 2–4. Specifically, the Examiner finds “[t]he historical data is maintained after the node/key is inserted into the list, as a key “k” is first given a rank of 1 upon insertion . . . and ***changed throughout its lifetime***

***based on its access.***” Ans. 3 (emphasis added) (citing Ergun 223 ¶ 3, 217 ¶ 2).

We are persuaded by Appellant’s argument as the Examiner has not identified sufficient evidence or provided sufficient explanation as to how Ergun teaches the creating step, as recited in claim 1. Specifically, the Examiner has not provided sufficient evidence to show that Ergun teaches incrementing a node upon its creation as opposed to incrementing a node based on its historical data the develops over time based on its access. To the contrary, the Examiner’s factual finding is premised on incrementing a node over its “lifetime based on [historical] access.” Ans. 3. Accordingly, based on the current record, and the specific sections of Ergun cited by the Examiner, we agree with Appellant that the Examiner’s finding Ergun teaches the creating step is in error because it is not supported by a preponderance of the evidence. *See In re Caveney*, 761 F.2d 671, 674 (Fed. Cir. 1985) (Examiner’s burden of proving non-patentability is by a preponderance of the evidence); *see also In re Warner*, 379 F.2d 1011, 1017 (CCPA 1967) (“The Patent Office has the initial duty of supplying the factual basis for its rejection. It may not, because it may doubt that the invention is patentable, resort to speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies in its factual basis.”).

Appellant raises additional issues in the Brief. We are persuaded of error with regard to the identified issue discussed *supra*, which is dispositive as to the rejection of all claims. Therefore, we do not reach the additional issues.

Accordingly, we are constrained on this record to reverse the Examiner’s rejection of claim 1, along with the rejection of independent

claims 12 and 18, which recite limitations commensurate in scope to the disputed limitations discussed above, and dependent claims 2–7, 13, 15–17, 19, and 20.

Moreover, because the Examiner has not shown that Lubbers cures the foregoing deficiencies regarding the rejection of the independent claims, we will not sustain the obviousness rejection of dependent claims 8–10, 11, and 14 for similar reasons.

#### DECISION

For the above reasons, we reverse the Examiner’s decision rejecting claims 1–20.

REVERSED